



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,512	10/15/2003	Gary A. Solomon	10559-842001 / P16868	5241

20985 7590 02/23/2006

FISH & RICHARDSON, PC
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

EXAMINER

SUGENT, JAMES F

ART UNIT	PAPER NUMBER
----------	--------------

2116

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/687,512	Applicant(s) SOLOMON ET AL.	
	Examiner James Sugent	Art Unit 2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☒ Claim(s) 3, 9, 13, 15-17, 19, 23, 24, 26, 27 and 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 3, 9, 13, 15-17, 19, 23, 24, 26, 27 and 30 are objected to because of the following

5 informalities:

- Claims 3, 13, 23 and 30 contain the trademark/trade name “PCI Express”. The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a
10 trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe a high-speed peripheral interconnect device and, accordingly, the identification/description is indefinite.
- Claims 3, 9, 13, 15-17, 19, 23, 24, 26, 27 and 30 all lack positive antecedent basis:
 - 15 ○ Claims 3, 13, 23 and 30 recite the limitation "the Data Link Layer Packet protocol (DLLP)." There is insufficient antecedent basis for this limitation in the claim. Change to “a Data Link Layer Packet protocol (DLLP).”
 - Claims 9, 17, 19 and 27 recite the limitation "the protocol virtualization control register." There is insufficient antecedent basis for this limitation
20 in the claim. Change to “a protocol virtualization control register.”
 - Claims 15-17 recite the limitation "the bridge." There is insufficient antecedent basis for this limitation in the claim. Change to “a bridge.”

Art Unit: 2116

- Claim 16 recites the limitation "the data link layer packet protocol packet."

There is insufficient antecedent basis for this limitation in the claim.

Change to "a data link layer packet protocol packet."

- Claim 19 recites the limitation "the bridge associated with the first component" (lines 4 and 5) and "the bridge for the second component" (line 8). There is insufficient antecedent basis for this limitation in the claim. Change "the bridge associated with the first component" to "a bridge associated with the first component." Change "the bridge for the second component" to "a bridge for the second component."

- Claim 24 recites the limitation "the first bridge" (line 5). There is insufficient antecedent basis for this limitation in the claim. Change to "a first bridge."

- Claims 26 and 27 recite the limitation "the event notification." There is insufficient antecedent basis for this limitation in the claim. Change to "an event notification."

- Claim 27 recites "the second the bridge includes a device to store instructions to cause the second bridge to:" (lines 1-3). There is insufficient antecedent basis for this limitation in the claim. Examiner asserts the applicant's intentions were to introduce a second bridge into the switching fabric that is associated with the second component recited in claim 21. Change to "the switching fabric comprises: a first bridge associated with the first component; a second bridge associated with the

second component wherein the second bridge includes a device to store instructions to cause the second bridge to:"

Appropriate correction is required. Please note: the examiner is examining this case using the above changes noted for all claim objections.

5

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

10 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15 Claims 1, 2, 4, 11, 14-16 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bosloy et al. (U.S. Patent No. 6,714,544) (hereinafter referred to as Bosloy) in view of Merritt (U.S. Patent No. 6,393,025 B1) (hereinafter referred to as Merritt).

As to claim 1, Bosloy discloses a method comprising: initiating (generating; column 11, lines 36-41) a transaction using a protocol (Bosloy discloses method and apparatus to make a
20 network connection using any type of protocol; column 13, lines 58-63) that directs packets (Bosloy discloses one of the protocols that the invention can utilize is the Frame Relay protocol which, as is known in the art, is a packet switching, data link layer protocol) based on physical location (Bosloy discloses two devices [420 and 422] that are addressable within the network; column 11, lines 23-36) of a receiving device (422) over a network (412, 414 and 416) that
25 directs packets based on path routing information in packets (Bosloy discloses a packet switching data link protocol [Frame Relay protocol] wherein, as is known in the art, the packet

Art Unit: 2116

header contains addressing information unique to the destination for path routing usage), by establishing a virtual link partner relationship (column 17, lines 42-47) between a first component (420) and a second component (422) coupled by the network (412, 414 and 416) (column 11, lines 23-35 and column 15, lines 19-35).

5 Bosloy does not directly disclose a switching fabric for which the packets can be transmitted through to the destination.

 Merritt teaches a network comprising a first component (25) and a second component (75) wherein packets (30) are transmitted through a switching fabric (100 and 200). The packet comprises a payload and a header and is processed using a protocol (column 2, lines 47-65).

10 It would have been obvious to one of ordinary skill of the art, having the teachings of Bosloy and Merritt before him at the time the invention was made, to modify the network disclosed by Bosloy such that the network comprises switching fabric as taught by Merritt.

 One of ordinary skill in the art would be motivated to make use of switching fabric in view of the teachings of Merritt, as doing so would give the added benefit of processing time
15 sensitive packets (column 1, lines 30-35).

 As to claim 2, Bosloy discloses a method wherein the switching fabric (as discussed hereinabove) includes a pair of bridges (428 and 430).

 As to claim 4, Bosloy discloses a method wherein the transaction is for a protocol communication that assumes a point-to-point connection between link partners (column 33, lines
20 41-47).

 As to claim 11, Bosloy discloses a computer program product residing on a computer readable medium for processing a packet comprises instructions to cause a computer to: initiate

Art Unit: 2116

(generate; column 11, lines 36-41) a transaction by a first component (420) to a second component (422) over a network that requires routing information (Bosloy discloses the network utilizing a packet switching data link protocol [Frame Relay protocol] wherein, as is known in the art, the packet header contains addressing information unique to the destination for path routing usage); and establish a virtual link partner relationship (column 17, lines 42-47) between the first component (420) and the second component (422) in response to the initiated transaction (column 11, lines 23-35 and column 15, lines 19-35).

Bosloy does not directly disclose a switching fabric for which the packets can be transmitted through to the destination.

Merritt teaches a network comprising a first component (25) and a second component (75) wherein packets (30) are transmitted through a switching fabric (100 and 200). The packet comprises a payload and a header and is processed using a protocol (column 2, lines 47-65).

It would have been obvious to one of ordinary skill of the art, having the teachings of Bosloy and Merritt before him at the time the invention was made, to modify the network disclosed by Bosloy such that the network comprises switching fabric as taught by Merritt.

One of ordinary skill in the art would be motivated to make use of switching fabric in view of the teachings of Merritt, as doing so would give the added benefit of processing time sensitive packets (column 1, lines 30-35).

As to claim 14, Bosloy discloses a computer program product wherein the transaction is for a protocol communication that assumes a point-to-point connection between link partners (column 33, lines 41-47).

Art Unit: 2116

As to claim 15, Bosloy discloses computer program product wherein instructions to initiate (generate) further comprises instructions to: issue (sending) by the first component (420) a data link layer packet protocol packet (Bosloy discloses a packet switching data link protocol [Frame Relay protocol] wherein, as is known in the art, the packet header contains addressing
5 information unique to the destination for path routing usage) to a bridge (428) associated with the first component (column 16, line 45 thru column 17, line 5).

As to claim 16, Bosloy discloses computer program product wherein instructions to initiate (generate) further comprises instructions to: decode (column 23, lines 20-23) the data link layer packet protocol packet (Bosloy discloses a packet switching data link protocol [Frame
10 Relay protocol] wherein, as is known in the art, the packet header contains addressing information unique to the destination for path routing usage) issued by the first component (420); and send an event notification to the bridge for the second component (422) (column 11, lines 36-46).

As to claim 21, Bosloy discloses a network system comprising: a network (412, 414 and
15 416) that requires routing information in packets (Bosloy discloses a packet switching data link protocol [Frame Relay protocol; column 13, lines 58-63] wherein, as is known in the art, the packet header contains addressing information unique to the destination for path routing usage) that traverse the network; a first component (420); a second component (422) that communicates with the first component over the network by a protocol (Frame Relay protocol) and the second
20 establishing a virtual link partner relationship (column 17, lines 42-47) to communication using the protocol (column 11, lines 23-35 and column 15, lines 19-35).

Art Unit: 2116

Bosloy does not directly disclose a switching fabric for which the packets can be transmitted through to the destination.

Merritt teaches a network comprising a first component (25) and a second component (75) wherein packets (30) are transmitted through a switching fabric (100 and 200). The packet
5 comprises a payload and a header and is processed using a protocol that does not require routing information (Service Specific Convergence Sublayer-Protocol; column 2, lines 47-65).

It would have been obvious to one of ordinary skill of the art, having the teachings of Bosloy and Merritt before him at the time the invention was made, to modify the network disclosed by Bosloy such that the network comprises switching fabric as taught by Merritt.

10 One of ordinary skill in the art would be motivated to make use of switching fabric in view of the teachings of Merritt, as doing so would give the added benefit of processing time sensitive packets (column 1, lines 30-35).

As to claim 28, Bosloy discloses a network system comprising: a pair of network components (420 and 422); a network (412, 414 and 416) coupling the network components, the
15 network of the type that requires routing information in packets that traverse the network (Bosloy discloses the network utilizing a packet switching data link protocol [Frame Relay protocol] wherein, as is known in the art, the packet header contains addressing information unique to the destination for path routing usage) to couple the components and with the second component (422) establishing a virtual link partner relationship (column 17, lines 42-47) to communication
20 using the protocol (column 11, lines 23-35 and column 15, lines 19-35).

Bosloy does not directly disclose a switching fabric for which the packets can be transmitted through to the destination.

Art Unit: 2116

Merritt teaches a network comprising a first component (25) and a second component (75) wherein packets (30) are transmitted through a switching fabric (100 and 200). The packet comprises a payload and a header and is processed using a protocol (column 2, lines 47-65).

5 It would have been obvious to one of ordinary skill of the art, having the teachings of Bosloy and Merritt before him at the time the invention was made, to modify the network disclosed by Bosloy such that the network comprises switching fabric as taught by Merritt.

One of ordinary skill in the art would be motivated to make use of switching fabric in view of the teachings of Merritt, as doing so would give the added benefit of processing time sensitive packets (column 1, lines 30-35).

10

Claims 3, 13, 23 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bosloy et al. (U.S. Patent No. 6,714,544) (hereinafter referred to as Bosloy) and Merritt (U.S. Patent No. 6,393,025 B1) (hereinafter referred to as Merritt) as applied to claims 1, 11, 21 and 28 above, and further in view of Vicard (U.S. Patent Publication No. 2003/0182415 A1) (hereinafter referred to as Vicard).

15

As to claim 3, Bosloy discloses a method wherein the protocol is a Data Link Layer Packet protocol (DLLP) (Bosloy discloses the network utilizing a packet switching data link protocol [Frame Relay protocol] wherein, as is known in the art, the packet header contains addressing information unique to the destination for path routing usage; column 13, lines 58-63)

20 but does not disclose the transaction is used in establishing a power management state of a given link that is shared by the first and second components.

Vicard teaches a power management method to be used within a network (100) wherein the components can be placed in a similar power management state (paragraph 82).

It would have been obvious to one of ordinary skill of the art, having the teachings of Bosloy, Merritt and Vicard before him at the time the invention was made, to modify the transaction of the system disclosed by Bosloy to use ability of the power management transaction is used to place the network devices in a similar power state as taught by Vicard.

One of ordinary skill in the art would be motivated to make use of the power management transactions in view of the teachings of Vicard, as doing so would give the added benefit of allowing the user manually change the power state of the network system if he chooses to do so (paragraph 15).

As to claim 13, Bosloy discloses a computer program product wherein the instructions to initiate (generate) the transaction is a Data Link Layer Packet protocol (DLLP) (Bosloy discloses the network utilizing a packet switching data link protocol [Frame Relay protocol] wherein, as is known in the art, the packet header contains addressing information unique to the destination for path routing usage; column 13, lines 58-63) but does not disclose the transaction is used in establishing a power management state of a given link that is shared by the first and second components.

Vicard teaches a power management method to be used within a network (100) wherein the components can be placed in a similar power management state (paragraph 82).

It would have been obvious to one of ordinary skill of the art, having the teachings of Bosloy, Merritt and Vicard before him at the time the invention was made, to modify the

Art Unit: 2116

transaction of the system disclosed by Bosloy to use ability of the power management transaction is used to place the network devices in a similar power state as taught by Vicard.

One of ordinary skill in the art would be motivated to make use of the power management transactions in view of the teachings of Vicard, as doing so would give the added benefit of allowing the user manually change the power state of the network system if he chooses to do so (paragraph 15).

As to claim 23, Bosloy discloses a system wherein the protocol is a Data Link Layer Packet protocol (DLLP) (Bosloy discloses the network utilizing a packet switching data link protocol [Frame Relay protocol] wherein, as is known in the art, the packet header contains addressing information unique to the destination for path routing usage; column 13, lines 58-63) but does not disclose the transaction is used in establishing a power management state of a given link that is shared by the first and second components.

Vicard teaches a power management method to be used within a network (100) wherein the components can be placed in a similar power management state (paragraph 82).

It would have been obvious to one of ordinary skill of the art, having the teachings of Bosloy, Merritt and Vicard before him at the time the invention was made, to modify the transaction of the system disclosed by Bosloy to use ability of the power management transaction is used to place the network devices in a similar power state as taught by Vicard.

One of ordinary skill in the art would be motivated to make use of the power management transactions in view of the teachings of Vicard, as doing so would give the added benefit of allowing the user manually change the power state of the network system if he chooses to do so (paragraph 15).

Art Unit: 2116

As to claim 30, Bosloy discloses a system wherein the protocol is a Data Link Layer Packet protocol (DLLP) (Bosloy discloses the network utilizing a packet switching data link protocol [Frame Relay protocol] wherein, as is known in the art, the packet header contains addressing information unique to the destination for path routing usage; column 13, lines 58-63)

5 but does not disclose the transaction is used in establishing a power management state of a given link that is shared by the first and second components.

Vicard teaches a power management method to be used within a network (100) wherein the components can be placed in a similar power management state (paragraph 82).

It would have been obvious to one of ordinary skill of the art, having the teachings of
10 Bosloy, Merritt and Vicard before him at the time the invention was made, to modify the transaction of the system disclosed by Bosloy to use ability of the power management transaction is used to place the network devices in a similar power state as taught by Vicard.

One of ordinary skill in the art would be motivated to make use of the power management transactions in view of the teachings of Vicard, as doing so would give the added
15 benefit of allowing the user manually change the power state of the network system if he chooses to do so (paragraph 15).

Claims 5-10, 12, 17-20, 22, 24-27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bosloy et al. (U.S. Patent No. 6,714,544) (hereinafter referred to as Bosloy)
20 and Merritt (U.S. Patent No. 6,393,025 B1) (hereinafter referred to as Merritt) as applied to claim 1, 2, 11, 21 and 28 above, and further in view of Kaganoi (U.S. Patent No. 6,772,269 B1) (hereinafter referred to as Kaganoi).

Art Unit: 2116

As to claim 5, Bosloy discloses a method wherein initiating includes: issuing (sending; column 11, lines 42-46) by the first component (420) a data link layer packet protocol packet (Bosloy discloses the network utilizing a packet switching data link protocol [Frame Relay protocol] wherein, as is known in the art, the packet header contains addressing information unique to the destination for path routing usage; column 13, lines 58-63) and comprises a bridge (428) associated with the first device (column 16, line 45 thru column 17, line 5). However, Bosloy does not disclose the bridge comprising a protocol virtualization control register.

Kaganoi teaches a bus switched system that comprises bridges (13 and 23) that comprises an input registers (201) and output registers (203) that receive and transmit, respectively, all data that is sent through the bridges (column 9, line 48 thru column 10, line 11).

It would have been obvious to one of ordinary skill of the art, having the teachings of Bosloy, Merritt and Kaganoi before him at the time the invention was made, to modify the bridges disclosed by Bosloy to include the input and output registers as taught by Kaganoi.

One of ordinary skill in the art would be motivated to make use of the input and output registers within the bridges in view of the teachings of Kaganoi, as doing so would increase the transfer bandwidth thereby increasing the amount of data transferred per unit time (column 2, line 65 thru column 3, line 3).

As to claim 6, Bosloy discloses a method wherein initiating further includes: decoding (column 23, lines 20-23) the data link layer packet protocol packet (Bosloy discloses a packet switching data link protocol [Frame Relay protocol] wherein, as is known in the art, the packet header contains addressing information unique to the destination for path routing usage; column 13, lines 57-63) issued by the first component (420) and sending an event notification (column

Art Unit: 2116

11, lines 56-61) to a protocol virtualization control register (as discussed hereinabove) in the bridge (430) for the second component (422).

As to claim 7, Bosloy wherein initiating further includes: writing (receiving) an event notification into the protocol virtualization control register (as discussed hereinabove) within the
5 bridge (428) for the second component (422) (column 11, lines 47-49).

As to claim 8, Bosloy discloses a method wherein initiating further includes: generating a corresponding DLLP packet (as discussed hereinabove); and sending the corresponding DLLP packet to the second component (column 11, line 23 thru column 12, line 12).

As to claim 9, Bosloy discloses a method initiating comprises: issuing (sending; column
10 11, lines 42-46) by the first component (420) a data link layer packet protocol packet (Bosloy discloses a packet switching data link protocol [Frame Relay protocol] wherein, as is known in the art, the packet header contains addressing information unique to the destination for path routing usage; column 13, lines 57-63) to the bridge (428) associated with the first component (428); decoding (column 23, lines 20-23) the data link layer packet protocol packet (as discussed
15 hereinabove) issued by the first component (420) and sending an event notification (column 11, lines 56-61) to the bridge (430) for the second component (422); and writing (receiving; column 11, lines 47-49) the event notification into the bridge (430) associated with the second component (422) (column 11, line 36 thru column 12, line 4). However, Bosloy does not disclose the bridge comprising a protocol virtualization control register.

20 Kaganoi teaches a bus switched system that comprises bridges (13 and 23) that comprises an input registers (201) and output registers (203) that receive and transmit, respectively, all data that is sent through the bridges (column 9, line 48 thru column 10, line 11).

Art Unit: 2116

It would have been obvious to one of ordinary skill of the art, having the teachings of Bosloy, Merritt and Kaganoi before him at the time the invention was made, to modify the bridges disclosed by Bosloy to include the input and output registers as taught by Kaganoi.

One of ordinary skill in the art would be motivated to make use of the input and output registers within the bridges in view of the teachings of Kaganoi, as doing so would increase the transfer bandwidth thereby increasing the amount of data transferred per unit time (column 2, line 65 thru column 3, line 3).

As to claim 10, Bosloy discloses a method wherein initiating further includes: generating a corresponding DLLP packet including data in the packet that was issued by first component; and propagating (sending) the corresponding DLLP packet to the second component (422) (column 11, line 23 thru column 12, line 12).

As to claim 12, Bosloy discloses a computer program product wherein the switching fabric (as discussed hereinabove) includes a pair of bridges (428 and 430). each bridge including a protocol virtualization control register. However, Bosloy does not disclose the bridges comprising a protocol virtualization control register.

Kaganoi teaches a bus switched system that comprises bridges (13 and 23) that comprises an input registers (201) and output registers (203) that receive and transmit, respectively, all data that is sent through the bridges (column 9, line 48 thru column 10, line 11).

It would have been obvious to one of ordinary skill of the art, having the teachings of Bosloy, Merritt and Kaganoi before him at the time the invention was made, to modify the bridges disclosed by Bosloy to include the input and output registers as taught by Kaganoi.

Art Unit: 2116

One of ordinary skill in the art would be motivated to make use of the input and output registers within the bridges in view of the teachings of Kaganoi, as doing so would increase the transfer bandwidth thereby increasing the amount of data transferred per unit time (column 2, line 65 thru column 3, line 3).

5 As to claim 17, Bosloy discloses a computer program product wherein instructions to initiate further comprises instructions to: write (receiving) the event notification within a bridge (as discussed hereinabove) for the second component (column 11, lines 47-49). However, Bosloy does not disclose the bridge comprising a protocol virtualization control register.

10 Kaganoi teaches a bus switched system that comprises bridges (13 and 23) that comprises an input registers (201) and output registers (203) that receive and transmit, respectively, all data that is sent through the bridges (column 9, line 48 thru column 10, line 11).

It would have been obvious to one of ordinary skill of the art, having the teachings of Bosloy, Merritt and Kaganoi before him at the time the invention was made, to modify the bridges disclosed by Bosloy to include the input and output registers as taught by Kaganoi.

15 One of ordinary skill in the art would be motivated to make use of the input and output registers within the bridges in view of the teachings of Kaganoi, as doing so would increase the transfer bandwidth thereby increasing the amount of data transferred per unit time (column 2, line 65 thru column 3, line 3).

20 As to claim 18, Bosloy discloses a computer program product wherein instructions to initiate further comprises instructions to: generate a corresponding DLLP packet, which is effectively the same packet that was issued by first component; and propagate the corresponding DLLP packet to the second component (column 11, line 23 thru column 12, line 4).

As to claim 19, Bosloy discloses a computer program product wherein instructions to initiate further comprises instructions to issue (sending) by the first component (420) a data link layer packet protocol packet (Bosloy discloses a packet switching data link protocol [Frame Relay protocol] wherein, as is known in the art, the packet header contains addressing

5 information unique to the destination for path routing usage; column 13, lines 57-63) to a bridge (428) associated with the first component (428); decode (column 23, lines 20-23) the data link layer packet protocol packet issued by the first component (420) and sending an event notification to a bridge (430) for the second component (422); and write the event notification within the bridge (430) for the second component (422). However, Bosloy does not disclose the
10 bridge comprising a protocol virtualization control register.

Kaganoi teaches a bus switched system that comprises bridges (13 and 23) that comprises an input registers (201) and output registers (203) that receive and transmit, respectively, all data that is sent through the bridges (column 9, line 48 thru column 10, line 11).

It would have been obvious to one of ordinary skill of the art, having the teachings of
15 Bosloy, Merritt and Kaganoi before him at the time the invention was made, to modify the bridges disclosed by Bosloy to include the input and output registers as taught by Kaganoi.

One of ordinary skill in the art would be motivated to make use of the input and output registers within the bridges in view of the teachings of Kaganoi, as doing so would increase the transfer bandwidth thereby increasing the amount of data transferred per unit time (column 2,
20 line 65 thru column 3, line 3).

As to claim 20, Bosloy discloses a computer program product wherein instructions to initiate further comprises instructions to: generate a corresponding DLLP packet, which is

Art Unit: 2116

effectively the same packet that was issued by first component; and propagate (sending) the corresponding DLLP packet to the second component (column 11, line 23 thru column 12, line 4).

As to claim 22, Bosloy discloses a system of wherein the switching fabric (as discussed
5 hereinabove) includes first and second bridges (428 and 430). each first and second bridge including a protocol virtualization control register. However, Bosloy does not disclose the bridges comprising protocol virtualization control registers.

Kaganoi teaches a bus switched system that comprises bridges (13 and 23) that comprises an input registers (201) and output registers (203) that receive and transmit, respectively, all data
10 that is sent through the bridges (column 9, line 48 thru column 10, line 11).

It would have been obvious to one of ordinary skill of the art, having the teachings of Bosloy, Merritt and Kaganoi before him at the time the invention was made, to modify the bridges disclosed by Bosloy to include the input and output registers as taught by Kaganoi.

One of ordinary skill in the art would be motivated to make use of the input and output
15 registers within the bridges in view of the teachings of Kaganoi, as doing so would increase the transfer bandwidth thereby increasing the amount of data transferred per unit time (column 2, line 65 thru column 3, line 3).

As to claim 24, Bosloy discloses a system further comprising: a device (424) to store instructions (within memory 555; column 19, lines 1-28) to cause the first component to: issue
20 (sending) a data link layer packet protocol packet (Bosloy discloses a packet switching data link protocol [Frame Relay protocol] wherein, as is known in the art, the packet header contains addressing information unique to the destination for path routing usage; column 13, lines 57-63)

Art Unit: 2116

to a first bridge (428) that is associated with the first component (420) (column 11, line 23 thru column 12, line 4). However, Bosloy does not disclose the bridges comprising protocol virtualization control registers.

Kaganoi teaches a bus switched system that comprises bridges (13 and 23) that comprises
5 an input registers (201) and output registers (203) that receive and transmit, respectively, all data that is sent through the bridges (column 9, line 48 thru column 10, line 11).

It would have been obvious to one of ordinary skill of the art, having the teachings of Bosloy, Merritt and Kaganoi before him at the time the invention was made, to modify the bridges disclosed by Bosloy to include the input and output registers as taught by Kaganoi.

10 One of ordinary skill in the art would be motivated to make use of the input and output registers within the bridges in view of the teachings of Kaganoi, as doing so would increase the transfer bandwidth thereby increasing the amount of data transferred per unit time (column 2, line 65 thru column 3, line 3).

As to claim 25, Bosloy discloses a system wherein the first bridge (428) includes
15 instructions (as discussed hereinabove) to cause the first bridge (428) to: decode (column 23, lines 20-23) the data link layer packet protocol packet (as discussed hereinabove); and send an event notification to the second bridge for the second component (column 11, line 23 thru column 12, line 4).

As to claim 26, Bosloy discloses a system wherein the second the bridge (430) includes
20 instructions (as discussed hereinabove) to cause the second bridge (430) to: receive an event notification into the protocol virtualization control register (as discussed hereinabove) within the

Art Unit: 2116

second bridge (430) for the second component (422); and generate a corresponding DLLP packet to the second component (column 11, line 23 thru column 12, line 4).

As to claim 27, system of claim 21 wherein the switching fabric (as discussed hereinabove) comprises: a first bridge (428) associated with the first component (420); and a
5 second bridge (430) associated with the second component (422) wherein the second bridge includes a device (as discussed hereinabove) to store instructions to cause the second bridge to: receive an event notification within the second bridge for the second component; and generate a corresponding DLLP packet to the second component. However, Bosloy does not disclose the bridges comprising protocol virtualization control registers.

10 Kaganoi teaches a bus switched system that comprises bridges (13 and 23) that comprises an input registers (201) and output registers (203) that receive and transmit, respectively, all data that is sent through the bridges (column 9, line 48 thru column 10, line 11).

It would have been obvious to one of ordinary skill of the art, having the teachings of Bosloy, Merritt and Kaganoi before him at the time the invention was made, to modify the
15 bridges disclosed by Bosloy to include the input and output registers as taught by Kaganoi.

One of ordinary skill in the art would be motivated to make use of the input and output registers within the bridges in view of the teachings of Kaganoi, as doing so would increase the transfer bandwidth thereby increasing the amount of data transferred per unit time (column 2, line 65 thru column 3, line 3).

20 As to claim 29, Bosloy discloses a system wherein the pair of components (420 and 422) are computers (Though Bosloy depicts the devices as telephones, it is known in the art that data being processed over a telephone network necessitates a computer to processes the digital

Art Unit: 2116

packets received) coupled to a pair of bridges (428 and 430) in the fabric (as discussed hereinabove). However, Bosloy does not disclose the bridges comprising protocol virtualization control registers.

Kaganoi teaches a bus switched system that comprises bridges (13 and 23) that comprises
5 an input registers (201) and output registers (203) that receive and transmit, respectively, all data that is sent through the bridges (column 9, line 48 thru column 10, line 11).

It would have been obvious to one of ordinary skill of the art, having the teachings of Bosloy, Merritt and Kaganoi before him at the time the invention was made, to modify the bridges disclosed by Bosloy to include the input and output registers as taught by Kaganoi.

10 One of ordinary skill in the art would be motivated to make use of the input and output registers within the bridges in view of the teachings of Kaganoi, as doing so would increase the transfer bandwidth thereby increasing the amount of data transferred per unit time (column 2, line 65 thru column 3, line 3).

15 ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Sugent whose telephone number is (571) 272-5726. The examiner can normally be reached on 8AM - 4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
20 supervisor, Lynne Browne can be reached on (571) 272-3670. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Art Unit: 2116

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

James Sugent
Patent Examiner, Art Unit 2116
February 9, 2006


LYNNE H. BROWNE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100